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| 10/099,659 | 03/15/2002 | Jeffrey A. Tilton | 25102A | 2971 |
| 22889 | 7590 | 02/24/2004 | EXAMINER | |
| OWENS CORNING | | | BOYD, JENNIFER A | |
| 2790 COLUMBUS ROAD | | | ART UNIT | |
| GRANVILLE, OH 43023 | | | PAPER NUMBER | |

1771

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,659

Applicant(s)

TILTON, JEFFREY A.

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The Applicant's Amendments and Accompanying Remarks, filed October 17, 2003, have been entered and have been carefully considered. Claims 1 and 6 are amended, claims 21 – 26 are added and claims 1 – 26 are pending. In view of Applicant's submitted data sheet with Inventor's address, the Examiner withdraws the objection to the Oath/Declaration as set forth in paragraph 1 of the previous Office Action mailed August 13, 2003. In view of Applicant's Amendment, the Examiner withdraws the objection to claims 6 and 10 as set forth in paragraph 2 of the previous Office Action mailed August 13, 2003. In view of the amendment requiring that the high melt bicomponent fiber has a melt flow temperature above that of the low melt bicomponent fiber, the Examiner withdraws all rejections as set forth in paragraphs 3 – 7 of the previous Office Action dated August 13, 2003. However, after an updated search, additional prior art was found which renders the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1 – 4, 8 – 9 and 13 – 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Goettmann (US 5,851,355).

Goettmann is directed to a nonwoven composite web useful as a support for a reverse

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osmosis membrane (column 1, lines 5 – 10).

As to claim 1, Goettmann teaches a composite material comprising polymeric staple fibers, a first fiber consisting of, at least in part, of a first thermoplastic binder material which melts at a temperature less than the melting temperature of the polymeric staple fibers, and a second binder fiber consisting of, at least in part, of a second thermoplastic binder material which melts at a second melting temperature less than the first melting temperature (column 2, lines 40 – 55). Goettmann teaches that the composite material comprises 5 to 40% by weight of a first polyester staple fiber, 0 to 60% by weight of a second polyester staple fiber, 15 to 50% by weight of a first thermoplastic binder fiber and 1 to 10% by weight of a second thermoplastic binder fiber (column 3, lines 55 – 68). Goettmann teaches that the first and second thermoplastic binder fibers are sheath-core bicomponent fibers (column 2, lines 55 – 65). The Examiner equates the polymeric staple fibers to Applicant's "staple fibers", the first thermoplastic binder material to Applicant's "high melt bicomponent fibers" and the second thermoplastic binder material to Applicant's "low melt bicomponent fibers".

As to claims 2 - 4, Goettmann teaches that the composite material comprises a first polyester staple fiber with a denier in the range of 0.2 to 3.0 (a diameter of 4.5 – 17.6 microns) present in the amount of 5 – 40% by weight and a second polyester staple fiber with a denier in the range of 0.2 to 3.0 (a diameter of 4.5 – 17.6 microns) present in the amount of 0 – 60% by weight (column 3, lines 55 – 67). Goettmann teaches in the most preferred embodiment that the first bi-component thermoplastic fiber has a denier of 1.0 (a diameter of 10.2 microns) and the second bi-component thermoplastic fiber has a denier of 2.0 (a diameter of 14.4 microns) (column 4, lines 10 – 20). Goettmann teaches that the composite material comprises 15 to 50% by

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weight of a first thermoplastic binder fiber and 1 to 10% by weight of a second thermoplastic binder fiber (column 3, lines 55 – 68). In the most preferred embodiment, Goetmann teaches that the first thermoplastic binder fiber has a denier of 1.0 and the second thermoplastic binder fiber has a denier of 2.0 (column 4, lines 1 – 20). Assuming an approximate density of 1.37 g/m^3 , the average fiber diameter would meet the Applicant's diameter requirements.

As to claim 8, 14 – 15 and 17 – 18, Goetmann teaches that the first and second bicomponent binder fibers has a co-polyester sheath and a polyester core (column 2, lines 55 – 65). It is known in the art that Kuraray EP-101 fibers and N-720H fibers (column 4, lines 1 – 20) comprise polyethylene terephthalate as the polyester component.

As to claims 9 and 13, Goetmann teaches that the staple fibers comprise polyester fibers (column 2, lines 55 – 60).

As to claim 16, Goetmann teaches that the second thermoplastic binder fibers, or “low melt bicomponent fibers”, have a co-polyester sheath that melts at 225°F (107.2°C) (column 2, lines 55 – 65).

As to claim 19, Goetmann teaches that the first thermoplastic binder fibers, or “high melt bicomponent fibers”, have a co-polyester sheath that melts at 375°F (190.5°C) (column 2, lines 60 – 65).

4. Claims 1, 13, 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagata et al. (US 6,165,921).

Nagata is directed to a fibrous acoustical material for reducing noise transmission and method for producing the same (Title).

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As to claim 1, Nagata teaches a material comprising first, second and third fibers (Abstract). The first, second and third fibers are respectively in the amounts of 10 – 90% by weight, 5 – 85% by weight and 5 – 85% by weight (Abstract). In Example 1, Nagata teaches that the first, second and third fibers can be staple fibers (column 6, lines 65 – 68). Nagata teaches that the first fiber is preferably made of a fiber-forming polyester (column 3, lines 19 – 30) and has a first softening point of at least 160°C (column 3, lines 20 – 25). Nagata teaches that the second fiber can comprise a core-and sheath composite fiber (column 3, lines 50 – 55) and has a second softening point which is 30 – 100°C lower than the first softening point of the first fiber (column 3, lines 45 – 50). Nagata teaches that the third fiber can comprise a core-and-sheath composite fiber (column 3, lines 35 – 40) and has a third softening point which is at least 80°C lower than the first softening point (column 4, lines 30 – 35). In Example 1, Nagata teaches a first fiber with a softening point of 240°C, a second fiber with a softening point of 170°C and a third fiber with a softening point of 110°C (column 7, lines 1 – 20). It should be noted that the second fiber has a higher softening, or Applicant's "melt flow temperature", than the third fiber. The Examiner equates the first fiber to Applicant's "staple fiber", the second fiber to Applicant's "high melt bicomponent fiber" and the third fiber to Applicant's "low melt bicomponent fiber".

As to claim 13, Nagata teaches that the first fiber, or "staple fiber", is preferably made of a fiber-forming polyester (column 3, lines 19 – 30).

As to claim 17, Nagata teaches in example 1 that the second fiber, or "high melt bicomponent fiber", has a core portion made of PET and a sheath portion of a copolyester (column 7, lines 1 – 10).

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As to claim 20, Nagata teaches that the second fiber, or "high melt bicomponent fiber", has a softening point of 170°C (column 7, lines 5 – 10). It should be noted that the Applicant states in the Specification on page 6, lines 15 – 20, that the bicomponent fibers are crystalline OR semi-crystalline. In order for the core of Nagata's second fiber to maintain integrity, the material must be crystalline or at least semi-crystalline.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 – 7, 10 – 12 and 21 – 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Goettmann (US 5,851,355).

As to claims 5 – 7 and 10 – 11, although Goettmann does not explicitly teach the claimed flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6, 10 and 21 – 26, the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11, it is reasonable to presume that the claimed flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6 and 10 and the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11 is inherent to Goettmann. Support for said presumption is found in the use of like materials (i.e. a nonwoven material comprising polyester staple fibers

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and two types of polyester/copolyester bicomponent fibers in the desired proportions and fiber diameter ranges) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6 and 10 and the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11 would obviously have been present once the Goettmann product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to providing of this rejection made above under 35 USC 102.

As to claim 12, Goettmann teaches that the staple fibers comprise polyester fibers (column 2, lines 55 – 60).

Response to Arguments

7. Applicant's arguments with respect to claims 1 – 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0994.


Jennifer Boyd
January 29, 2004


Ula C. Ruddock
Primary Examiner
Tech Center 1700